CS-02-072

April 30, 2004

To: Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

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Subject: Serial No. 10/785,520 02/24/04

Liu Huang et al.

OXYGEN DOPED SiC FOR Cu BARRIER AND ETCH STOP LAYER IN DUAL DAMASCENE FABRICATION

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 4, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date Stephen B. Ackerman 5/4/04

U.S. Patent 6,472,333 to Xia et al., "Silicon Carbide Cap Layers for Low Dielectric Constant Silicon Oxide Layers," discusses an organosilicate glass layer employed as a thick dielectric layer.

U.S. Patent 6,541,397 to Bencher, "Removable Amorphous Carbon CMP Stop," describes an amorphous carbon cap layer on a low k dielectric layer and serves as an etch mask and as a CMP stop layer.

U.S. Patent 6,436,808 to Ngo et al., "NH3/N2-Plasma Treatment to revent Organic ILD Degradation," describes a well known method of densifying a porous SiCOH layer to perform a plasma treatment such as the N2/NH3 plasma process.

U.S. Patent 6,436,824 to Chooi et al., "Low Dielectric Constant Materials for Copper Damascene," discusses nitrogen doped SiC (SiCN) being used as a barrier layer in a damascene structure.

U.S. Patent 6,455,417 to Bao et al., "Method for Forming Damascene Structure Employing Bi-Layer Carbon Doped Silicon Nitride/Carbon Doped Silicon Oxide Etch Stop Layer," describes a method that mitigates the poisoning effect of a SiCN etch stop layer.

U.S. Patent 6,417,090 to Wang et al., "Damascene Arrangement for Metal Interconnection Using Low K Dielectric Constant Materials for Etch Stop Layer," discusses low k dielectric materials such as benzocyclobutene or hydrogen silsesquioxane (HSQ) employed as an etch stop layer in a damascene structure.

U.S. Patent 6,410,462 to Yang et al., "Method of Making Low-K Carbon Doped Silicon Oxide," discusses a carbon doped silicon oxide layer formed on a substrate and using silane, an oxygen source, and a mixture of CH4 and acetylene for the deposition step.

U.S. Patent 6,486,082 to Cho et al., "CVD Plasma Assisted Lower Dielectric Constant SiCOH Film," discloses an oxygen or nitrogen doped SiC layer employed as an etch stop layer.

Sincerely,

Stephen B. Ackerman,
Reg. No. 37761

Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number
CS-02-072	10/785,520
Applicant: Liu Huang et al.	
Filing Date: 02/24/04	Group Art Unit:

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6472333	10/29/02	Xia et al.	438	758	3/28/01
	6541397	4/1/03	Bencher	438	780	3/29/02
	6436808	8/20/02	Ngo et al.	438	623	12/7/00
	6436824	8/20/02	Chooi et al.	438	687	7/2/99
	6455417	9/24/02	Bao et al.	438	637	7/5/01
	6417090	7/9/02	Wang et al.	438	622	1/4/99
	6410462	6/25/02	Yang et al.	438	788	5/12/00
	6486082	11/26/02	Cho et al.	438	789	6/18/01

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.